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ABSTRACT

The Alaska State Board of Education has adopted the national "Minimum Standards for School Buses, 1970 Revised Edition." The purpose of this document is to specify school bus minimum standards for Alaska that are in addition to the national standards. All regular school buses must comply with applicable federal motor vehicle safety standards in effect on the date of vehicle manufacture. In case of conflict between the national standards and minimum Alaska standards, the more stringent requirements prevail unless application of the less stringent standard is necessary to comply with arctic equipment specifications established in this document. (Author/MLF)

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MINIMUM STANDARDS FOR ALASKA SCHOOL BUSES

2nd EDITION (Revised)
1977

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Supplement to

Minimum Standards for

School Buses

1970 Revised Edition

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FORWARD

The State Board of Education has adopted the national "Minimum Standards for School Buses, 1970 Revised Edition." The purpose of this document is to specify school bus minimum standards for Alaska which are in addition to the national standards. Therefore, when using this document you must have in hand the *National Standards* referred to above. All regular school buses must comply with applicable Federal Motor Vehicle Safety Standards in effect on the date of vehicle manufacture. In case of conflict between the national standards and minimum Alaska standards, the more stringent requirements prevail unless application of the less stringent standard is necessary to comply with arctic equipment specifications established in this document.

MORE THAN SIXTEEN PASSENGERS

Section I. This section contains the additional standards required for all school buses having a manufacturer's rated capacity of over 16 passengers.

A. The Bus Chassis

1. **Axle.** The axle specifications are as follows:
   a) The front axle or other type approved suspension assembly must have a gross weight rating at the ground, based on the chassis manufacturer's rating, equal to or exceeding 110% of that portion of the maximum total load which is supported by the front axle or other type approved suspension assembly.

   b) The rear axle must be a full-floating type and have a gross weight rating at the ground, based on the chassis manufacturer's rating, equal to or exceeding 110% of that portion of the maximum total load which is supported by it.

2. **Generator or alternator.** Wiring must be of heavy gauge and capable of carrying a minimum amperage output of 90 amperes. A generator or alternator with rectifier must have a rated maximum output of no less than 85 amperes.

3. **Bumper, front and rear.** In addition to national standards, a bus must have two towhooks which are chassis mounted on the front and two towhooks on the rear. Towhooks may not protrude beyond the bumper. Towhooks must be of sufficient strength to withstand the stress of towing the vehicle when fully loaded.

B. The Bus Body

1. **Defrosters.** The bus must be equipped with defrosters sufficient to furnish hot air to keep the entire windshield, the window to the left of the driver and the entrance door clear of condensation, ice and snow.

2. **Construction.**
   a) Floors. The floor must be of metal at least equal in strength to 14-gauge steel and have an overlayer of 5-ply 5/8 inch plywood,

exterior type, manufactured in accordance with Federal Standard CS 45-55 or other applicable commercial standards. If wood is used for insulation, the wood and the steel must be bonded so as to prevent accumulation of moisture on the top surface of the steel floor and under the surface of the wood floor.

b) Underbody. The bus underbody must be zinc coated.

3. **Heaters.**

a) Heaters must be capable of maintaining a minimum inside temperature of 40 degrees Fahrenheit at average minimum January temperatures for the areas served as established by the U.S. Department of Commerce National Oceanographic & Atmosphere Administration. The inside temperature is to measured midway back in the bus at the shoulder height of seated school children.

b) Each bus must have four heaters, with minimum capacities as follows:

(1) rear heater - 80,000 BTU;
(2) front heater and defroster core - 93,000 BTU;
(3) center heater - 46,000 BTU (not required in Southeast Alaska);
(4) Stepwell heater and defroster - no minimum (not required in Southeast Alaska).

c) Heater ducts must have no less than three variable-direction outlets.

4. **Fire Extinguisher.** Each bus must be equipped with a five pound dry chemical located within easy reach of the seated driver.

5. **Insulation.**

a) Overhead ceiling, side walls and underfloor must be insulated by a foamed-in-place insulation which forms a high density, non-combustible resilient plastic foam. The nominal K-factor must be 0.2 at 70 degrees Fahrenheit. The space between the inner and outer panels in the roof and side walls must be completely filled. (Foam insulation is not required in Southeast Alaska.)

b) Body posts and roof channel cavities must be insulated as in (a)

of this paragraph or by use of closed-cell foam rubber material. Insulation material must meet Federal Motor Vehicle Safety Standard No. 302 where applicable.

6. **First Aid Kit.** All first aid equipment must be mounted within easy reach and immediate control of the seated driver. The minimum content requirements are:

Bandage compress (sterile gauze pads, 4")	2 each
Bandage compress (sterile gauze pads, 2")	1 each
Adhesive absorbent bandage (adhesive tape, 1")	2 each
Triangular bandage, 40"	1 each
Gauze bandage, 4"	1 each
Absorbent gauze compress	1 each

7. **Identification.**

a) School bus bodies must bear the words SCHOOL BUS in black letters on both the front and rear of the body. This lettering must be at least eight inches high and at least ¾ in stroke.

b) All school buses must show ownership identification with minimum five inch high lettering on the beltline or directly below the windows on each side of the bus.

c) There must be a sign located below the rear window of the bus which reads, "Unlawful to Pass When Red Lights are Flashing." The sign must be black letters on a white background. Black letters must be no less than four inches and not more than six inches high.

d) All school buses must be painted school bus yellow.

8. **Identification Plate.** A metal plate must be secured directly on the right dash immediately forward of the entrance door of the bus upon which is stated the motor number, chassis weight, GVW rating (ready for installation of body) and the manufacturer's rated seating capacity of the bus.

9. **Lamps.**

a) All school buses must be equipped with four amber electric warning lamps which work in an automatic integrated system with

four red traffic control lamps. The amber warning lamps and the red traffic control lamps must be a type approved by the Alaska Department of Public Safety.

b) The amber lamps and red lamps must be installed as follows: Lamps must be in pairs, one amber and one red on the left and right front and the left and right rear. Each pair must be located approximately six inches below the top of the bus, with the lamps as near each other as possible. The amber lamps must be on the same plane as the red lamps, or as close as possible, and closer to the center than the red lamps. The face of each lamp must be in a true vertical and horizontal axis when the bus is on a smooth level surface.

c) The amber lamps must be controlled by a switch located to the left of the driver and within easy reach. Closing the entrance door must cut off the red lamps and recycle the system automatically for the next stop. A pilot light system, indicating that the lamp system is switched on, must be installed in a location where its operation is plainly visible to the driver.

10. **Directional Signals.** Each school bus must be equipped with seven inch amber turn signals that meet specifications of the Society of Automotive Engineers. These signals must be mounted to conform to the following specifications:

a) each school bus must be equipped with signal units giving signals to the front and to the rear and so arranged that front and rear signals will be given on the side toward which the turn is to be made;

b) signal units on the front and on the rear must be spaced as far apart laterally as practicable but not less than three feet;

c) the location of the front signal units must be such that they can be clearly distinguished when the headlamps are lighted;

d) signal units must be mounted as high as practicable in the beltline;

e) signal units must be mounted so that the signal from the lamp is visible from directly ahead of the front lamps and directly behind the rear lamps and 45 degrees to the left and right of both front and rear;

f) within the horizontal angles specified, all signals must be visible from 10 degrees above to 10 degrees below the horizontal;

g) there must be a visible or audible device which gives a clear and unmistakable indication to the driver that the signal is turned "on"; and

h) there must be turn signals mounted on the first body section behind the driver and the first body section behind the entrance door.

11. **Mirrors.** An exterior convex mirror, 7-½ inches in diameter, must be located on the left front side in such a manner that a seated driver may observe, through its use, areas to the front or side of the bus where direct observation is not possible.

12. **Equipment.**
    a) Skid chains must be available for use when needed.

    b) All buses must be equipped with front and rear mud flaps.

13. **Stop Arm Signal.** The national standard for stop arm signals applies

except that all signs must be octagonal in shape and have reflective lettering. All new buses purchased after April 1, 1977 must also have two sequential red flashing lights on the stop arm signal.

14. **Rear Stop Lights.** Rear stop lights must be no less than seven inches in diameter.

15. **Rub Rails.** The national standard for rub rails applies, except that they must be painted black.

16. **Service Door.** The service door hinges must be covered with a flexible material. Entrance steps into the vehicle behind the service door must have a rubber tread.

17. **Rear Emergency Door.** The national standard for this exit applies.

18. **Other Requirements.** Each bus must have:

    a) A static roof exhaust vent;
    b) aisle joint moldings; and
    c) a red painted arrow no less than 12 inches long and 6 inches high, pointing to the emergency door handle.

TEN TO SIXTEEN PASSENGERS

Section II. The following standards apply to vehicles used to transport students with a capacity of 10-16 students. Each bus must:

A. carry a sign, in black letters at least eight inches high on a white background, both front and rear, stating, SCHOOL BUS. The sign must be a Scotchlite type material. Whenever the vehicle is not being used as a school bus, the sign must be removed or covered.

B. carry a first aid kit, flags and flares and fire extinguisher inside the vehicle, as required for buses over 16 passenger (manufacturer's rating);

C. be equipped with directional turn signals;

D. be a hard-top vehicle;

E. have four red flashing traffic control lights mounted on top of the vehicle. These red flashing lights must be secured to the roof by either a kit which straps on top of the vehicle in the same manner as a luggage rack, or be mounted directly to the roof. In sparsely settled areas, an exception to this requirement may be granted by the Commissioner of Education.

F. have a body color of school bus yellow;

G. have a rear emergency door;

H. have amber lights mounted on top with the red lights operating in conjunction with the four red traffic control lights;

I. have a stop arm signal as required in Section I.B., 13; and

J. meet all safety items listed on the *Report of School Bus Inspection* Form No. 05-126-18, except the following:

a) service door;
b) cross-over mirror.

LESS THAN TEN PASSENGERS

Section III. Passenger cars and other vehicles, including boats and airplanes, with a seating capacity of less than ten which are used to transport students.

A. Vehicles in this class must meet all applicable safety inspection standards of the Alaska Department of Public Safety in accordance with the *School Bus Inspection Report*, Form No. 05-126-18, except the following:

1. alternate flashing red and amber lights;
2. school bus signs;
3. stop arm signal;
4. service door;
5. emergency door (all items);
6. cross-over mirror;
7. no particular color is required.

B. Loading and unloading: Vehicles in this class must pull completely off the roadway when loading or unloading children.

C. General characteristics: Vehicles in this class may be of any generally accepted type and configuration, including but not limited to snow machines, track-type vehicles, air cushion (surface effects) vehicles (ACV's), all terrain vehicles (ATV's) and other amphibious vehicles.

This section does not apply to parents who transport their own children to school or who transport children to school without remuneration.

ACTIVITY BUSES

Section IV. Activity Buses. Activity buses must meet all of the safety requirements applicable to other school vehicles of the same seating capacity as stated in Sections I, II and III above, with the following exceptions:

A bus used solely for activities and used only to transport students from school to a destination and back without stops along the roadway to load or unload children need not have (1) the flashing red or amber warning lights; (2) the stop arm signal; (3) the rear UNLAWFUL TO PASS WHEN RED LIGHTS ARE FLASHING; (4) school bus yellow exterior paint.